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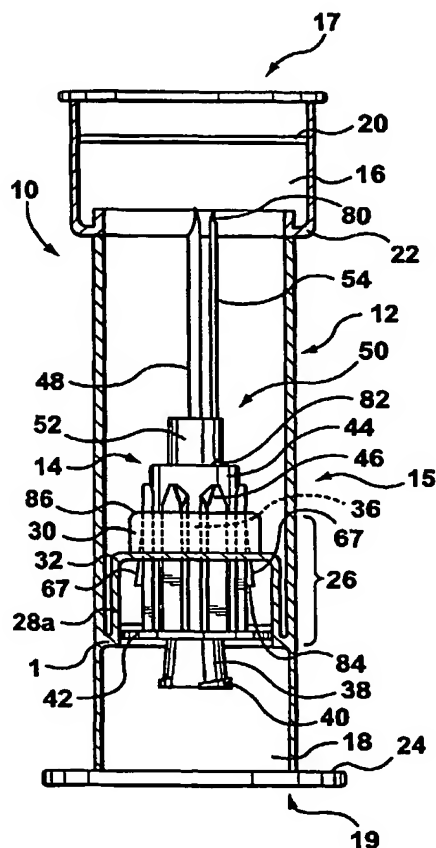
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(54) Title: PHARMACEUTICAL DELIVERY SYSTEMS AND METHODS FOR USING SAME



(57) Abstract: The present invention provides an assembly (10) for transferring a liquid between a vial (56) and a syringe (66). The assembly includes a housing (12) having a central portion (15), the housing being open at one end (19) and having a vial socket (16) at the other opposite end (17) adapted to receive and retain a vial having a penetrable closure (62). The housing further includes a sleeve (26) located within the central portion of the housing. The sleeve has a first portion (28a), a second portion (30) adjacent the first portion, and a shoulder (32) between the first portion and the second portion. The assembly also includes a protractible luer adaptor (14) with a central hub (44) having a first axial end and a second opposite axial end. The first axial end has a hollow piercing member (48) with a tip having an opening mounted thereon and the second axial end has an engaging member (38) for releasably engaging a syringe, the hollow piercing member, the central hub, and the engaging member being in fluid communication with one another. The protractible luer adaptor is longitudinally slidable within the sleeve between a retracted position where the hollow piercing member is substantially contained within the central portion of the housing and an advanced position where the tip of the hollow piercing member extends into the vial socket.

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